

San Ace 92L 9LG type

High Air Flow Long Life Fan

■ Features

High Air Flow and High Static Pressure

The maximum air flow of the San Ace 92L 9LG type is approximately 1.6 times and the maximum static pressure is approximately 4 times higher than that of our conventional long life fan.*

Long Life

The San Ace 92L 9LG type has an expected life of 180,000 hours (approximately 20 years), making this fan ideal for equipment that must operate without maintenance for extended periods.

*: Specification of Model No. 9LG0912P1H001. Our conventional long life fan is 92 x 92 x 25 mm "San Ace 92L", Model No. 9LG0912P4J001.



92×92×38mm

■ Specifications

The following nos. have **PWM controls, pulse sensors.**

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle <small>(Note 2) [%]</small>	Rated Current [A]	Rated Input [W]	Rated Speed [min ⁻¹]	Max. Air Flow [m ³ /min] [CFM]	MAX. Static Pressure [Pa] [inchH ₂ O]	SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9LG0912P1H001	12	10.2 to 13.8	100	2.0	24.0	9,000	3.70 130.6	430 1.72	61	-20 to +70	180,000
			20	0.18	2.16	2,700	1.11 39.1	38.7 0.15	30		
9LG0912P1F001			100	1.0	12.0	7,000	2.90 102.4	263 1.05	55		
			20	0.11	1.32	2,000	0.83 29.3	21.5 0.08	22		
9LG0924P1H001	24	20.4 to 27.6	100	0.9	21.6	9,000	3.70 130.6	430 1.72	61		
			20	0.08	1.92	2,700	1.11 39.1	38.7 0.15	30		
9LG0924P1F001			100	0.5	12.0	7,000	2.90 102.4	263 1.05	55		
			20	0.06	1.44	2,000	0.83 29.3	21.5 0.08	22		

Note1: PWM Frequency: 25 kHz

Note2: Fans do not rotate when PWM duty cycle is 0%.

Available options: **Without Sensor** **Pulse Sensor**

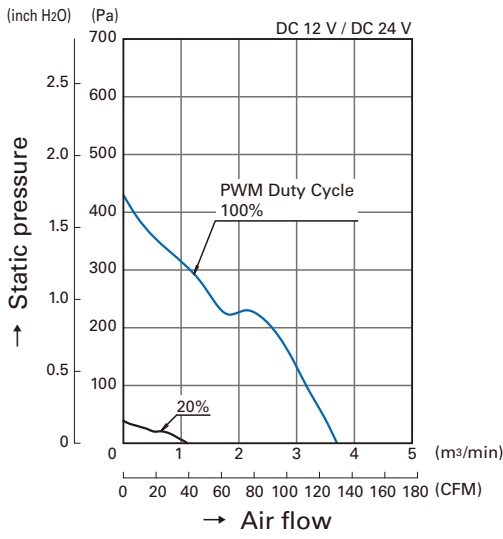
Please inquire as the availability of these functions depends on the model: **Lock Sensor**

■ Common Specifications

- Material Frame: Aluminum, Impeller: Plastics (Flammability: UL94V-1)
- Expected Life Refer to specifications
(L10: Survival rate: 90% at 60 °C, rated voltage, and continuously run in a free air state)
- Motor Protection System Current blocking function and reverse polarity protection
- Dielectric Strength 50 / 60 Hz, 500 VAC, 1 minute (between lead conductor and frame)
- Sound Pressure Level (SPL) Expressed as the value at 1 m from air inlet side
- Operating Temperature Refer to specifications (Non-condensing)
- Storage Temperature -30 °C to +70 °C (Non-condensing)
- Lead Wire ⊕Red ⊖Black Sensor: Yellow Control: Brown
- Mass Approx. 270 g

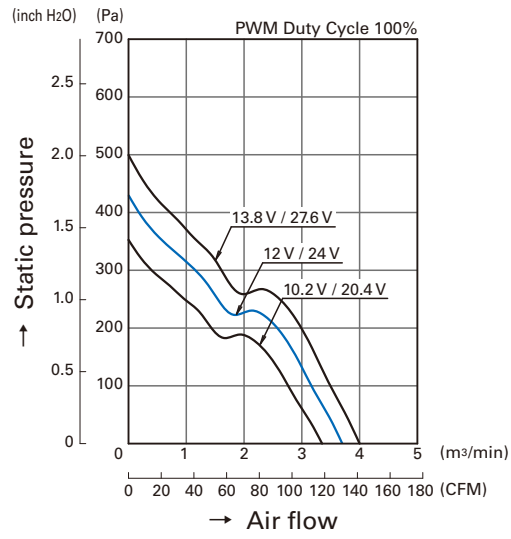
Air Flow - Static Pressure Characteristics

• PWM Duty Cycle

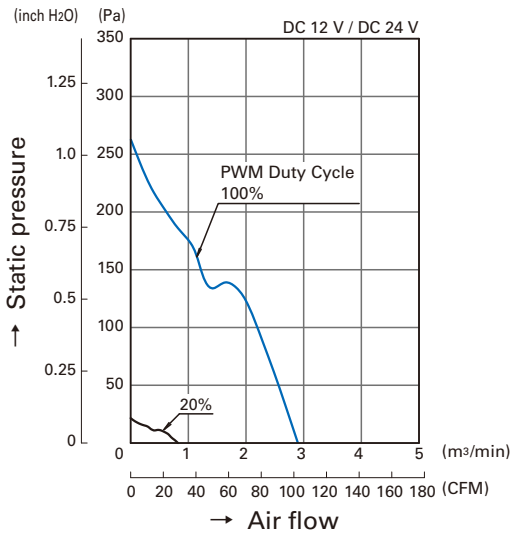


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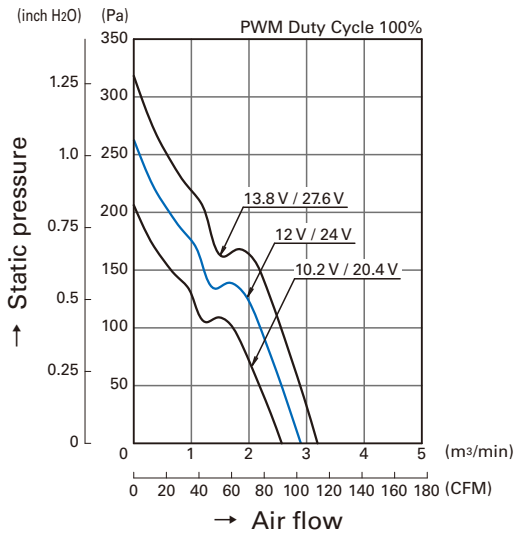
• Operating Voltage Range



9LG0912P1H001
9LG0924P1H001

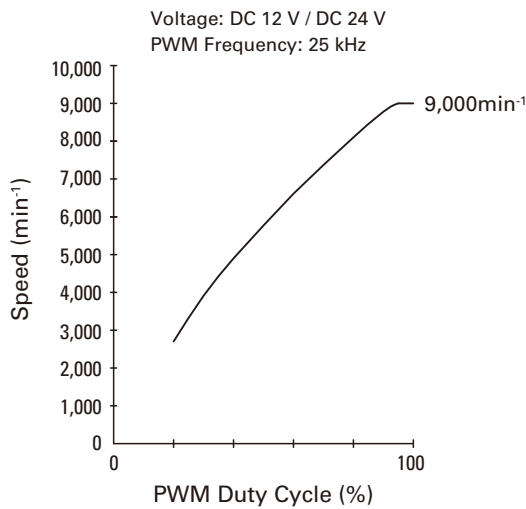


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9LG0924P1F001

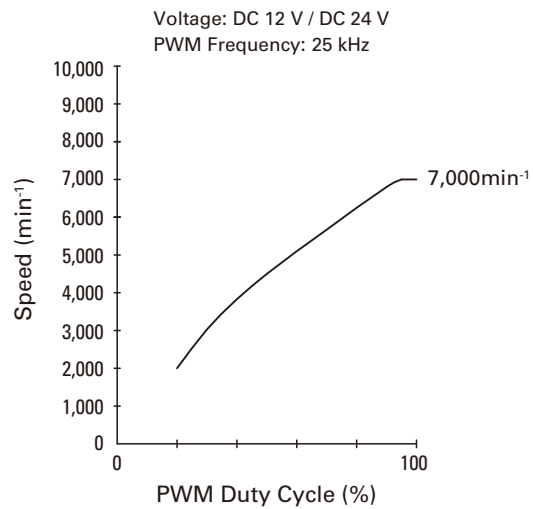


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PWM Duty - Speed Characteristics Example



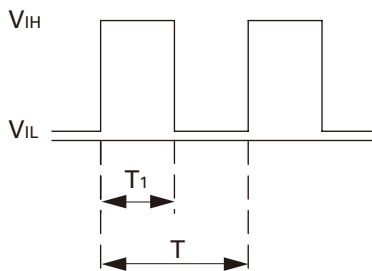
9LG0912P1H001
9LG0924P1H001



9LG0912P1F001
9LG0924P1F001

PWM Input Signal Example

Input Signal Waveform



$V_{IH}=4.75\text{ V to }5.25\text{ V}$

$V_{IL}=0\text{ V to }0.4\text{ V}$

$$\text{PWM Duty Cycle (\%)} = \frac{T_1}{T} \times 100$$

$$\text{PWM Frequency } 25\text{ (kHz)} = \frac{1}{T}$$

Source Current (I_{source}) : 1 mA Max. at control voltage 0 V

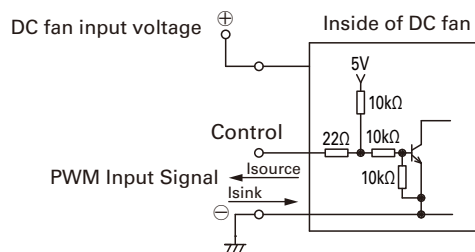
Sink Current (I_{sink}) : 1 mA Max. at control voltage 5.25 V

Control Terminal Voltage: 5.25 V Max. (Open Circuit)

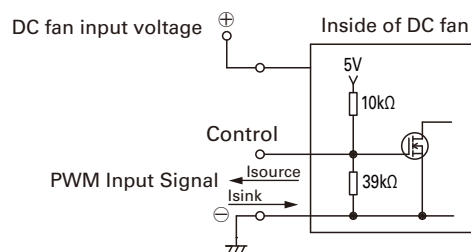
When the control lead wire is open, the fan speed is the same as the one at a PWM duty cycle of 100%.

Either TTL input, open collector or open drain can be used for PWM control input signal.

Example of Connection Schematic



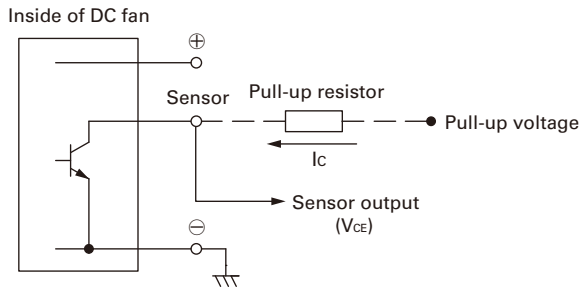
9LG0912P1H001
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9LG0924P1H001
9LG0924P1F001

Specifications for Pulse Sensors

Output circuit: Open collector



Rated Voltage 12 V Fan

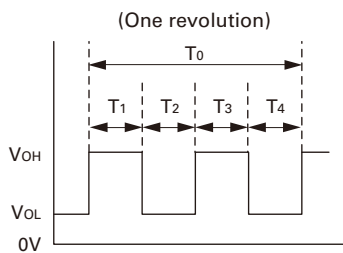
$V_{CE} = +13.8 \text{ V MAX.}$
 $I_c = 5 \text{ mA MAX. [} V_{OL} = V_{CE} \text{ (SAT)} = 0.6 \text{ V MAX.]}$

Rated Voltage 24 V Fan

$V_{CE} = +30 \text{ V MAX.}$
 $I_c = 10 \text{ mA MAX. [} V_{OL} = V_{CE} \text{ (SAT)} = 0.6 \text{ V MAX.]}$

Output Waveform (Need pull-up resistor)

In case of steady running

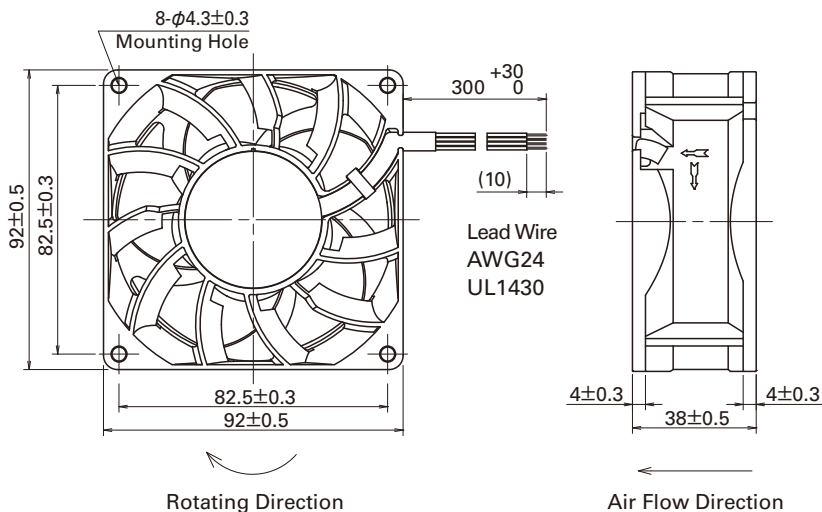


$$T_{1\sim 4} \doteq (1/4) T_0$$

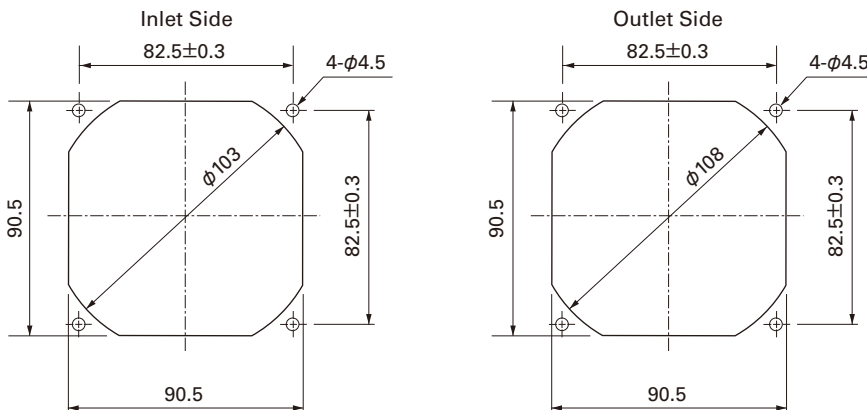
$$T_{1\sim 4} \doteq (1/4) T_0 = 60/4N \text{ (sec)}$$

$$N = \text{Fan speed (min}^{-1}\text{)}$$

Dimensions (unit : mm)



Reference Dimension of Mounting Holes and Vent Opening (unit : mm)



- The products shown in this catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- To protect against electrolytic corrosion that may occur in locations with strong electromagnetic noise, we provide fans that are unaffected by electrolytic corrosion.

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Specifications are subject to change without notice.

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